"Don't Fear the Reaper"[*]: Why Transferable Assets and Avoidable Costs Should Not Resurrect Predatory Pricing

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I dedicate this Note to my wife Genevieve and our "Little Bear"—I love you both more than I can describe.

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I. INTRODUCTION

Until recently, predatory pricing was a rapidly dying area of antitrust. Following years of judicial tapering of predatory pricing liability in the lower courts,[1] the Supreme Court dealt a devastating, and perhaps final, blow to the hopes of predatory pricing plaintiffs with its 1993 decision in *Brooke Group Ltd. v. Brown & Williamson Tobacco Corp.*[2] By requiring plaintiffs to prove that an alleged predator both (1) charged below-cost prices, and (2) could recoup its predatory losses, *Brooke Group* took an already unfriendly environment for plaintiffs and made it downright hostile.[3] Because *Brooke Group* created a less discretionary, and in most cases more demanding,[4] rule for lower courts to apply, plaintiffs found themselves significantly hobbled by the new rule. In fact, the two-part liability impediment provided by *Brooke Group* has proven so insurmountable that plaintiffs have not won a federal predatory pricing case since *Brooke Group* was decided.[5]

The complete inability of plaintiffs to succeed using the *Brooke Group* test paints a dire, yet telling, picture of the probable future of predatory pricing plaintiffs. The extreme degree of plaintiff failure has caused some commentators to go so far as to predict the imminent extinction of predatory pricing as a feasible claim.[6] Despite this impending demise, however, new approaches for determining predatory pricing liability continue to appear in antitrust literature.[7] These suggested approaches, for better or worse, aim to resuscitate predatory pricing law by making it easier for plaintiffs to prove liability. Thus, while predatory pricing claims may currently be existing on life support, many scholars remain poised at the electrical outlet to make sure the plug stays in.

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[1] *See infra* note 52 and accompanying text (describing the judicial tapering of predatory pricing that preceded the Supreme Court's *Brooke Group* decision).

[2] 509 U.S. 209 (1993).

[3] *Id.* at 222–23.

[4] The *Brooke Group* rule is more demanding in most cases because it requires both below cost pricing and recoupment. Prior to *Brooke Group,* courts were able to base predatory pricing liability on much more arbitrary reasons. *See* 3 PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW ¶ 745f (2d ed. 2001) (noting the "hodgepodge of rules, including numerous inconsistencies among the circuits," that existed prior to *Brooke Group*); Patrick Bolton et al., *Predatory Pricing: Strategic Theory and Legal Policy*, 88 GEO. L.J. 2239, 2251 (2000) (stating that, despite plaintiffs' difficulty proving the below cost pricing required by some lower courts, in the years leading up to *Brooke Group* "lower courts relaxed per se elements, and the litigation prospects of plaintiffs improved modestly").

[5] Bolton et al., *supra* note 4, at 2258–59 ("Of thirty-nine reported decisions, defendants have won thirty-six cases, and of the remaining three cases in which plaintiffs survived motions for summary judgment or dismissal, two were settled while the disposition of the third could not be resolved.").

[6] *See* C. Scott Hemphill, *The Role of Recoupment in Predatory Pricing Analyses*, 53 STAN. L. REV. 1581, 1585 (2001) ("The failure of private plaintiffs, combined with the reluctance of the U.S. government to bring claims, has reinforced the conclusion that *Brooke Group* sounded the 'death knell' of federal predatory pricing claims."); Ross D. Petty, *Predatory Promotion: A Theory of Antitrust Liability Whose Time Has Come?*, 27 AM. BUS. L.J. 215, 216 (1989) ("These cases, although not barring predatory pricing antitrust claims, probably sound the death knell for such claims.").

[7] *See infra* notes 8–10 and accompanying text (listing examples).

Virtually all of the new predatory pricing theories and approaches necessarily begin with a critical analysis of *Brooke Group*. For example, some scholars attack the *Brooke Group* rule because it does not take into account strategic behavior.[8] Others argue that requiring below-cost pricing is too restrictive.[9] Still others suggest retaining the overall *Brooke Group* rule but promote alternative ways for analyzing the below-cost pricing requirement.[10] Whatever the merits of each approach, because *Brooke Group* remains good law, the last category represents the only area likely to change the face of predatory pricing in the near future. To that end, the Department of Justice is currently advancing a recently suggested approach for calculating below-cost pricing—the avoidable cost approach.[11]

The *Brooke Group* Court did not indicate what specific costs are relevant for determining whether a firm priced below its costs.[12] This declination resulted in a myriad of suggested cost definitions by scholars, attorneys, and judges.[13] The most influential research discussing this topic, however, was published in 1996 by Professor William J. Baumol.[14] Baumol argues that avoidable costs (i.e., the costs that a firm can avoid by choosing not to predate) represent the most economically accurate costs to include in the below-cost pricing analysis.[15] In combination with the avoidable cost approach, many economists and lawyers now also recognize that firms employing transferable assets—assets that transfer between different geographic or product markets—present a unique situation that often results in a firm incurring extremely large avoidable costs.[16] If courts choose to utilize the proposed avoidable cost approach in cases where these transferable assets are involved, the combination will likely increase plaintiffs' ability to prove *Brooke Group*'s below-cost pricing and therefore could resurrect predatory pricing liability from its deathbed.

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[8] *See* Bolton et al., *supra* note 4, at 2239 (proposing an approach for determining predatory pricing liability that takes into account strategic behavior). Strategic behavior occurs when:

> In markets where information is imperfect, signaling strategies may enable a predator to mislead its rival into believing that market conditions are unfavorable, even when they are not. Signaling theories include reputation effect, test market predation, and cost signaling. In reputation effect predation, the most important of the signaling strategies, a predator reduces price in one market to induce the prey to believe that the predator will cut price in its other markets or in the predatory market itself at a later time, thereby enabling multimarket recoupment of predatory losses. In test market predation, the prey is attempting to ascertain consumer response to a new product or to its entry into a new geographic market. The predator frustrates the prey's market probe by openly cutting price in the test market to keep the prey ignorant about normal market conditions. Finally, in cost signaling, a predator drastically reduces price to induce the prey to believe that the predator has lower costs, when in fact the predator has no cost advantage.

Id. at 2248–49 (citations omitted). The Supreme Court has discounted approaches attempting to account for these strategic occurrences as "beyond the practical ability of a judicial tribunal to control without courting intolerable risks of chilling legitimate price-cutting." Brooke Group Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S 209, 223 (1993); *see also infra* note 57 (discussing the *Brooke Group* decision within the traditional economic framework and noting the views of both the Supreme Court and leading antitrust scholars on non-traditional approaches).

[9] *See* Aaron S. Edlin, *Stopping Above-Cost Predatory Pricing*, 111 YALE L.J. 941, 941–42 (2002) (arguing that "the decision in *Brooke Group* was no great day for consumers, for well-functioning markets, or for antitrust law," and suggesting that above-cost pricing can also hurt consumers).

[10] *See* William J. Baumol, *Predation and the Logic of the Average Variable Cost Test*, 39 J.L. & ECON. 49 (1996) (suggesting courts use avoidable costs in *Brooke Group*'s below-cost pricing test).

[11] *See* United States v. AMR Corp., 140 F. Supp. 2d 1141 (D. Kan. 2001) (rejecting the avoidable cost approach). This case is currently on appeal to the Tenth Circuit, however, so the issue is, for the moment, unresolved.

A recent predatory pricing case currently on appeal in the Tenth Circuit highlights these developments. In *United States v. AMR Corp.*,[17] the Department of Justice (DOJ) charged American Airlines with predatory pricing against smaller airlines that attempted to enter the market at various airport hubs.[18] At each of the hubs, American already controlled a significant portion of the air traffic.[19] When a new airline entered the market, American decreased its price to that charged by the new airline and dramatically increased its flight capacity.[20] Because the capacity increases involved transfer of airplanes from profitable markets to less profitable ones (i.e., asset transfer), American incurred a significant amount of avoidable costs.[21] The DOJ attempted to prove the requisite below-cost pricing by including the avoidable costs of transferring the airplanes in its below-cost pricing analysis.[22] Although the district court rejected the avoidable costs associated with the asset transfers, the Department of Justice appealed the decision.[23] If the Tenth Circuit chooses to overrule the district court, the result could be a marked improvement in the success rate of predatory pricing plaintiffs. This improved probability of success, coupled with the intense lure of treble damages for such antitrust violations,[24] could result in a dramatic increase in predatory pricing cases and an altered competitive landscape. Furthermore, because the Supreme Court has not yet decided what specific costs are appropriate under the *Brooke Group* test,[25] confusion among the courts could ensue for some time concerning which costs to include.

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[12] *Brooke Group*, 509 U.S. at 223 n.1 ("Because the parties in this case agree that the relevant measure of cost is average variable cost . . . we again decline to resolve the conflict among the lower courts over the appropriate measure of cost.").

[13] Many courts adopted the variable cost approach advocated prior to *Brooke Group* by Phillip Areeda and Donald Turner. *See* Phillip Areeda & Donald F. Turner, *Predatory Pricing and Related Practices Under Section 2 of the Sherman Act*, 88 HARV. L. REV. 697, 716–18, 732–33 (1975) (proposing the use of average variable cost); *see also* Baumol, *supra* note 10, at 49 (proposing the use of average avoidable cost).

[14] Baumol's approach has received attention from both prominent antitrust scholars and the Department of Justice. The DOJ is currently pursuing a predatory pricing case against American Airlines based on Baumol's approach. United States v. AMR Corp., 140 F. Supp. 2d 1141 (D. Kan. 2001); *see also* 3 AREEDA & HOVENKAMP, *supra* note 4, ¶ 740d3, at 435 (highlighting the virtue of using Baumol's avoidable cost approach in cases involving transferable assets).

[15] "Economically accurate" means that all of the costs relevant to the decision to enter or exit the market are included.

[16] For a more thorough description of transferable assets, see *infra* Section IV.

[17] 140 F. Supp. 2d 1141 (D. Kan. 2001).

[18] *Id.* at 1145.

[19] *Id.* at 1146–49.

[20] *See id.* at 1152 ("American believed that it had the ability to compete with LCC [(Low Cost Carrier)] service from [the airports] by implementing strategies of capacity additions in select markets and strong matching on price and availability."); *id.* at 1155–73 (outlining American's pricing and capacity on the routes at issue).

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[21] Profit losses that occur as a result of asset transfer are an avoidable cost. *See infra* notes 110–12 and accompanying text. American incurred significant profit losses as a result of its strategy: "American realized that its [pricing/capacity output strategy] could have a negative impact on profitability. In the fall of 1995, American's prediction that the capacity added . . . might impact profitability proved to be correct." *AMR*, 140 F. Supp. 2d at 1155.

[22] One of the government's proposed cost tests examined "[w]hether incremental (average avoidable) cost exceeded price." Reply Brief for Appellant, United States v. AMR Corp., 140 F. Supp. 2d 1141 (D. Kan. 2001) (Civil Action No. 99-1180-JTM), *available at* http://www.usdoj.gov/atr/cases/f10800/10856.htm (last visited Dec. 19, 2002) (on file with the Iowa Law Review). The approach also took into account lost profits (an avoidable cost). Complaint, United States v. AMR Corp., 140 F. Supp. 2d 1141 (D. Kan. 2001) (Civil Action No. 99-1180-JTM), *available at* http://www.usdoj.gov/atr/cases/f2400/2438.htm (last visited Dec. 19, 2002) (on file with the Iowa Law Review). The complaint stated:

> The additional revenues American obtained as a result of adding capacity on its [various routes] . . . were less than American's costs of adding the flights, as demonstrated in various ways, including the following:
>
> On each route, American's revenues on one or more of its added flights were below that flight's variable costs;
>
> On each route, as a result of adding capacity, American's total revenues on the route fell below American's total cost of serving the route, and the capacity additions worsened American's profit performance; and
>
> On each route, American's operations were unprofitable under its own measure of route profitability after it added capacity, and the capacity additions made American's operations more unprofitable.

Id.; United States v. AMR Corp., 140 F. Supp. 2d 1141, 1200–04 (D. Kan. 2001) ("The government asks the court, in its first and fourth proposed [cost] tests, to determine that American predated because its competitive actions reduced its effective profitability.").

[23] Brief for Appellant at 1, United States v. AMR Corp., 140 F. Supp. 2d 1141 (D. Kan. 2001) (No. 01-3202).

[24] "Treble damages" are "[d]amages given by statute in certain types of cases, consisting of the single damages found by the jury, actually tripled in amount." BLACK'S LAW DICTIONARY 393 (6th ed. 1990); *see* Clayton Act § 4, 15 U.S.C. § 15 (2001) ("[A]ny person who shall be injured in his business or property by reason of anything forbidden in the antitrust laws may . . . recover threefold the damages by him sustained, and the cost of suit, including reasonable attorney's fee."); Baumol, *supra* note 10, at 51 ("[I]f the [predatory pricing] lawsuit is indeed undertaken and won there is a rich additional bonus awaiting the plaintiff—trebled damages, which, in a total victory, can amount to many years of net earnings by either the plaintiff or the defendant.").

This Note examines the unique predatory pricing problem created by combining transferable assets with the proposed avoidable cost approach. Section II explains traditional predatory pricing theory and highlights the economic and policy concerns involved in creating predatory pricing rules. Section III explores the legal rules that govern predatory pricing claims and discusses the economic validity of those rules. Section IV outlines the unique problem that transferable assets create in applying the *Brooke Group* below-cost pricing test and explains why the avoidable cost approach for calculating costs in transferable asset cases may result in increased predatory pricing liability. Section V presents several practical problems with this new approach. Finally, Section VI suggests that a blanket rule requiring inclusion of the avoidable costs of asset transfer should not be included in the *Brooke Group* analysis—even though those costs may be "economically relevant."

II. THE ECONOMIC BACKGROUND

A basic understanding of the economic theory underlying predatory pricing is essential to any study of the legal issues involved. To assist the reader in understanding why policy makers are concerned with the problem, this Section outlines traditional predatory pricing theory and explains the unique policy considerations involved in making predatory pricing rules.

A. TRADITIONAL PREDATORY PRICING THEORY

Traditional predatory pricing occurs when a firm lowers its prices "below [an] appropriate measure of cost for the purpose of . . . reducing competition in the long run."[26] Essentially, "[a]fter the competitors are bankrupted by being forced to sell below cost for a prolonged period, the [predator will] raise[] his price in the market to the monopoly level."[27] Under the traditional scenario, if the predator successfully sustains its monopoly price for a sufficient period of time, it will recoup the losses suffered during the predatory period.[28] The success of this scheme depends, however, on the predator's ability to keep competitors out of the market following the predation. If firms are freely able to enter the market, the predator's monopoly prices will entice new competitors to enter the market and these new entrants will drive prices lower.[29]

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[25] *Supra* note 12 and accompanying text.

[26] BLACK'S LAW DICTIONARY 1177 (6th ed. 1990).

[27] RICHARD A. POSNER, ANTITRUST 361 (1974).

[28] AREEDA & HOVENKAMP, *supra* note 4, ¶ 723a, at 272–73. The predatory period is the period of time during which the predator was charging below its costs.

B. *ECONOMIC POLICY ISSUES, AND THE CONFLICT BETWEEN PREDATORY PRICING LAWS AND LOW SHORT-RUN PRICES*

Under normal circumstances, "antitrust law is not . . . concerned with setting a limit on price competition," because lower prices are a benefit of market competition.[30] Thus, in cases dealing with a monopoly or oligopoly, the usual problem is abnormally high prices resulting from restricted competition. With respect to predatory pricing, however, abnormally low prices are the underlying problem because a firm may use them to drive out competition.[31] This unusual situation creates a conflict for predatory pricing policy makers. By restricting low prices to eliminate possible predatory pricing, policy makers hurt consumers by keeping prices artificially high in the short run.[32]

The desire to strike a balance between society's interests in prohibiting anticompetitive, predatory business practices and in preserving low short-run prices has plagued policy makers and judges.[33] As one set of commentators stated, "history and economic theory teach that predatory pricing can be an instrument of abuse; on the other hand, price reductions are the hallmark of competition and the tangible benefit that consumers perhaps most desire from the economic system."[34] This concern for preserving low short-run prices has caused many scholars to be somewhat cautious in proposing legal rules relating to predatory pricing. For example, Areeda and Hovenkamp stress that:

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[29] *Id.* ¶ 729a, at 345–48. Entry of new firms into the market creates increased competition and tends to cause an increase in the supply of the relevant product. As a basic matter of economic theory, an increase in the supply of a product (holding all else equal) will result in a decrease in the price of that product. Hence, Areeda and Hovenkamp note:

> Predatory pricing claims should be dismissed as implausible where entry is plainly easy, especially where there has been continuous entry, and even more clearly where entry regularly occurred during the period of alleged marketwide predation. As the Supreme Court observed, predatory pricing claims may be rejected summarily when entry is easy, for otherwise the market would not be injured.

Id. ¶ 729a, at 345–48.

[30] *Id.* ¶ 723a, at 272–73.

[31] Predatory pricing situations normally arise not when competition is limited, but when competition is so fierce that pricing below relevant cost is considered unfair. The concern is future, not present, harm to consumers. Thus, those worried about predatory pricing are concerned about high prices, but those prices will only be high in the future (if at all). The low predatory price is the means of obtaining the monopoly power needed to obtain those future monopoly prices.

[32] Artificially high prices, in this context, are defined as prices that are above the normal market rate as a result of any given policy against predatory pricing. High short-run prices will occur if predatory pricing policies are too strict, resulting in significantly hindered price competition. *See infra* note 35 and accompanying text (explaining why strict predatory pricing rules hurt short-run price competition).

[33] *See infra* note 34 (highlighting the difficulty in balancing these competing interests).

[34] Bolton et al., *supra* note 4, at 2241 (describing the balance as "a dilemma that has perplexed and intrigued the antitrust community for many years").

> [T]he best course is to develop predation rules that are somewhat *underdeterrent*, with the *benefit of any doubt generally given to the defendant*. The goal should be to identify most cases of actual predation, while exonerating all those who have engaged in only competitive behavior or where the predation claims are doubtful.[35]

Caution is also warranted because many economists doubt the validity of predatory pricing as a rational economic action.[36] In the early years of predatory pricing analysis, many economists argued that predatory pricing was an "economically irrational" undertaking because a "predator [could not] sustain [the necessary] losses indefinitely, [and] the prey [would] not be induced to leave the market."[37] Economists' skepticism was so broad, in fact, that one commentator christened predatory pricing "the Rodney Dangerfield of economic theory . . . [because] it gets virtually no respect from economists."[38]

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[35] AREEDA & HOVENKAMP, *supra* note 4, ¶ 723b, at 273–75 (emphasis added); *see also* Cargill Inc. v. Monfort of Colorado, Inc., 479 U.S. 104, 122 n.17 (1986):

> [T]he mechanism by which a firm engages in predatory pricing—lowering prices—is the same mechanism by which a firm stimulates competition; because "cutting prices in order to increase business often is the very essence of competition . . .[;] mistaken inferences . . . are especially costly, because they chill the very conduct the antitrust laws are designed to protect."

(quoting Matsushita Elec. Indus. Co., Ltd. v. Zenith Radio Corp., 475 U.S. 574 (1986)); Baumol, *supra* note 10, at 51:

> Rules that make it excessively easy to secure conviction on charges of predation invite anticompetitive and rent-seeking litigation. Such rules tempt firms that cannot make it in the marketplace by virtue of superior products or greater efficiency and lower costs, to seek success over their more efficient rivals in the courts instead. . . . This can sometimes be accomplished by mere threat of a lawsuit, but if the lawsuit is indeed undertaken and won there is a rich additional bonus awaiting the plaintiff—trebled damages, which, in a total victory, can amount to many years of net earnings . . . . Long study of the subject has led me to the conclusion that litigation of this sort is a major handicap to the growth and competitiveness of the nation's economy.

[36] *See* ABA ANTITRUST SECTION, MONOGRAPH NO. 22, PREDATORY PRICING 41–43 (1996) [hereinafter ABA MONOGRAPH NO. 22] (explaining the reasoning behind this skepticism and identifying some of the well-known scholars who have adopted a skeptical view).

[37] Bolton et al., *supra* note 4, at 2244; *see also* Thomas J. DiLorenzo, *The Myth of Predatory Pricing*, POLICY ANALYSIS NO. 169 (Cato Inst. Washington, D.C.) Feb. 28, 1992 (arguing that predatory pricing is irrational), *available at* http://www.cato.org/pubs/pas/pa-169.html.

[38] DiLorenzo, *supra* note 37, at 2. The Supreme Court took a similar, if less creative, stance in *Matsushita Electric Industrial Co. v. Zenith Radio Corp.,* 475 U.S. 574 (1986), noting that "there is a consensus among commentators that predatory pricing schemes are rarely tried, and even more rarely successful." *Id.* at 589; *see also* ABA MONOGRAPH NO. 22, *supra* note 36, at 41–42:

Beginning in the 1980s, however, advances in economic theory such as "the emergence of modern game theory"[39] led some scholars to change their negative view of predatory pricing.[40] Under the traditional economic approach, economists assumed that information was perfectly disseminated to all actors within the market. This "perfect information" assumption negated any possibility (within the traditional model) of actors utilizing information asymmetries to act strategically. And in the absence of strategic behavior, most economists concluded that predatory pricing was irrational.[41] The "new body of research [challenged this] static framework of perfect information on which" the previous economists relied,[42] thereby convincing many scholars that predatory pricing can be rational in certain circumstances.[43] Despite these new arguments, however, the rationality of predatory pricing remains a very debatable topic among economists.[44] This disagreement about the validity of predatory pricing, coupled with the concern about preserving low, short-run prices, makes the development of proper legal rules on the subject both important and difficult.[45]

> The position, advocated by Bork and Easterbrook, among others, that predatory pricing does not pose a serious problem is based on the premise that rational profit-maximizing firms do not have any incentive to engage in predatory pricing. Stated otherwise, the Bork-Easterbrook position is based on an economic analysis that concludes that predatory pricing is unprofitable.

Id.; Frank H. Easterbrook, *Predatory Strategies and Counterstrategies*, 48 U. CHI. L. REV. 263, 269–70 (1981):

> The predator's rival, after all, has the same incentive as the predator to ride out the price war and collect monopoly profits once one of them has collapsed. Investors should be willing to back the intended victim, because it would be the more profitable survivor, having sustained smaller losses during the fight. (The predator loses more money because it must expand sales to meet demand at the low price.)

But see generally Herbert Hovenkamp, *Antitrust Policy After Chicago*, 84 MICH. L. REV. 213 (1985) (criticizing the Chicago School approach that underlies the view that predation is always irrational).

[39] Bolton et al., *supra* note 4, at 2247. Game theory "[a]nalyzes . . . [economic] behavior as a complex series of strategic moves and reactive countermoves among rival firms." KARL E. CASE & RAY C. FAIR, PRINCIPLES OF MICROECONOMICS 337 (5th ed. 1999).

[40] *See* Bolton et al., *supra* note 4, at 2247 (noting that this "new [method of] analysis explains predatory pricing in a dynamic world of imperfect and asymmetric information in which strategic conduct can be profitable"); *see also* ABA MONOGRAPH NO. 22, *supra* note 36, at 43–46 (highlighting specific types of markets and situations where predatory pricing may be rational).

[41] S*upra* notes 37–38 and accompanying text.

[42] Bolton et al., *supra* note 4, at 2247.

[43] *See supra* notes 39–40 (highlighting some of the new approaches that caused some economists to alter their view of predatory pricing).

[44] *See* ABA MONOGRAPH NO. 22, *supra* note 36, at 43–46 (describing the vast differences in opinion that surround the rationality of predatory pricing).

[45] AREEDA & HOVENKAMP, *supra* note 4, ¶ 723b, at 274 ("[A]ccurate predatory pricing

III. PREDATORY PRICING LAW

Predatory pricing law has endured a great deal of change throughout its relatively brief history. Although pro-plaintiff in the beginning, the law underwent a complete reversal during the ensuing decades, ultimately becoming a plaintiff's nightmare when *Brooke Group* was decided.[46] This Section provides a brief description of that progression and explains the modern predatory pricing test the Supreme Court outlined in *Brooke Group*.

A. THE STATUTORY BASE AND EARLY HISTORY

The statutory basis for predatory pricing law includes both Section 2 of the Sherman Act and the Robinson-Patman Act.[47] The initial enforcement was quite harsh to defendants and granted little attention to the importance of price competition:

> In the early years of the Robinson-Patman Act, [predatory pricing] enforcement protected small local firms from price cutting by large sellers. Discriminatory price cutting by a large interstate seller that injured a local rival, accompanied by predatory intent, was virtually per se unlawful. Largely missing was any consideration of the consumer interest in lower prices and vigorous competition. Plaintiffs won most litigated cases, including those they probably should have lost. It seems no exaggeration to call this the "populist era of predatory pricing enforcement."[48]

The tide began to change in 1975, however, when Phillip Areeda and Donald Turner developed a more economically accurate approach for

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rules are technical and difficult for courts to administer, and the rate of error is likely to be high. As a result, nonpredatory behavior may often be found predatory, thus punishing firms for perfectly legitimate conduct that antitrust law ordinarily seeks to encourage.").

[46] Bolton et al., *supra* note 4, at 2250–51.

[47] AREEDA & HOVENKAMP, *supra* note 4, ¶ 723a, at 272; *see* Sherman Act § 2, 15 U.S.C. § 2 (2000) (stating in relevant part that "[e]very person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States, or with foreign nations, shall be deemed guilty"); Clayton Act § 2 [as amended by the Robinson-Patman Act], 15 U.S.C. § 13 (2000):

> It shall be unlawful for any person engaged in commerce, either directly or indirectly, to discriminate in price between different purchasers of commodities . . . where the effect of such discrimination may be substantially to lessen competition or tend to create a monopoly in any line of commerce, or to injure, destroy, or prevent competition.

For further discussion about predatory pricing under the Robinson-Patman Act, see Brooke Group Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 220 (1993) (presenting a brief overview of the Supreme Court's view of congressional intent concerning the Robinson-Patman Act). *See also* AREEDA & HOVENKAMP, *supra* note 4, ¶¶ 745e–g, at 477–91 (discussing predatory pricing under the Robinson-Patman Act).

[48] Bolton et al., *supra* note 4, at 2250.

determining predatory pricing liability.[49] Under Areeda and Turner's approach, low prices are not considered predatory unless they are set below the firm's relevant cost of production.[50] Although considerable debate raged among lawyers and economists about what should constitute relevant "costs" under Areeda-Turner and similar cost tests, below-cost pricing tests in general became prevalent.[51] Over the next decade, widespread adoption of the Areeda-Turner test and similar cost based approaches quickly caused the number of successful predatory pricing claims to decrease dramatically.[52]

B. BROOKE GROUP*: THE MODERN PREDATORY PRICING TEST*

The Supreme Court's *Brooke Group* decision established a new predatory pricing framework that validated the lower courts' increasing use of below-cost pricing tests.[53] This new approach included a two-part test for determining whether an alleged predator is liable. The first step of the *Brooke Group* test adopts most of the Areeda-Turner test. Thus, prong one requires a predatory pricing plaintiff to prove "that the prices complained of are below an appropriate measure of its rival's costs."[54] The second step of the *Brooke Group* test requires proof that the alleged predator will likely be able to recoup its losses suffered during the predatory period.[55] Under this prong, "proof [of recoupment requires] that the predator will be able to raise price above the competitive level (recoupment capability) sufficient to compensate the predator for its predatory investment (recoupment sufficiency)."[56]

In many ways, the *Brooke Group* decision makes considerable economic sense.[57] Recall from Section II.B that economists widely believe that

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[49] *Id.* at 2251.

[50] For a more complete discussion of the Areeda-Turner test and the appropriate costs to use in it, see *infra* Sections III.C.1–2.

[51] *See* Bolton et al., *supra* note 4, at 2251 (explaining how the "Areeda-Turner rule had an immediate impact on the courts").

[52] *Id.* at 2251.

[53] *Id.* at 2255.

[54] Brooke Group Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 210 (1993).

[55] *Id.* at 225 ("The plaintiff must demonstrate that there is a likelihood that the predatory scheme alleged would cause a rise in prices above a competitive level that would be sufficient to compensate for the amounts expended on the predation, including the time value of the money invested in it.").

[56] Bolton et al., *supra* note 4, at 2255–56.

[57] More specifically, the *Brooke Group* decision makes sense within a *traditional* economic framework. That framework, however, relies on a number of standard assumptions (e.g., the assumptions that individuals act rationally and that each party possesses perfect information). *See* ANDREU MAS-COLELL ET AL., MICROECONOMIC THEORY 6 (1995) ("In much of microeconomic theory, individual preferences are assumed to be *rational.*"). The traditional model does not predict behavior accurately if these traditional economic assumptions fail, and in such cases the *Brooke Group* rule may not accurately determine whether an alleged predatory pricing scheme was exclusionary or whether recoupment was possible. The traditional model

"genuine cases of predation are very rare,"[58] and that mistaken conviction for predation can have devastating effects on the alleged predator, the specific market involved, and the economy as a whole.[59] Given these important concerns, the *Brooke Group* rule successfully recognizes two factors that, in most cases, must be true for a predatory pricing scheme to succeed. First, by requiring that the alleged predator charge prices below "an appropriate measure" of its costs, the Court recognized that prices charged above relevant costs normally do not have an exclusionary effect on efficient competitors.[60] This conclusion follows from a recognition of the sunk costs a firm faces when deciding whether to exit a market. As one commentator explained:

> [C]osts are defined to be sunk if the firm cannot escape them in the short-run, either because of a contract (say, with the landlord or the union) or because it has already signed a contract to buy the item whose cost is sunk (for example, a machine). If the firm stops producing, its revenue will fall to zero. Its short-run . . . costs [(costs that can be escaped by stopping production)] will also fall to zero. But its sunk costs—such as rent—will remain to plague it. If the firm is losing money, it will be better off continuing to operate if the resulting revenues produce any surplus above . . . [its short-run] costs, thereby making some contribution to sunk cost.[61]

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also fails to account for strategic behavior. *Supra* notes 39–42 and accompanying text. Therefore, if a firm acts strategically, the *Brooke Group* rule may fail to accurately determine whether a predatory scheme was successful in harming consumers. Because of these failures, some scholars promote alternative economic models for analyzing predatory pricing cases. *Supra* notes 8–10 and accompanying text. In a somewhat indirect way, however, the Supreme Court discounted non-traditional economic approaches, at least with respect to the below-cost pricing inquiry, by suggesting that approaches examining potential above-cost predation (which would not be predatory under the traditional framework) are "beyond the practical ability of a judicial tribunal to control without courting intolerable risks of chilling legitimate price-cutting." *Brooke Group*, 509 U.S at 223; *see also infra* notes 60–64 and accompanying text (examining the exclusionary effect of prices under the traditional framework). In addition, Areeda and Hovenkamp note that, with respect to determining predatory pricing liability, "[m]ost circuit courts have emphasized price-cost relationships and have explicitly agreed with us that there is no intelligible and administrable way to deal with the long-run strategic problem." AREEDA & HOVENKAMP, *supra* note 4, ¶ 723d2, at 277–78.

[58] Baumol, *supra* note 10, at 51.

[59] *See supra* note 34–36 and accompanying text (highlighting the dangers of overzealous predatory pricing laws).

[60] Brooke Group Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 223 (1993). As a general rule, the exclusionary effect of prices above a relevant measure of cost either reflects the lower cost structure of the alleged predator, and so represents competition on the merits, or is beyond the practical ability of a judicial tribunal to control without courting intolerable risks of chilling legitimate price-cutting. *Id.* at 223.

[61] Baumol, *supra* note 10, at 56.

Thus, unless a competitor is less efficient than the alleged predator (i.e., the competitor faces higher costs of production),[62] if the alleged predator charges a price above its relevant short-run costs, it cannot cause the rival firm to exit the market.[63] Furthermore, because it is the prolonged exclusion of competitors that allows a predator to charge monopoly prices,[64] pricing policies that are non-exclusionary are not typically a danger to consumers. By recognizing that above-cost prices do not exclude equally efficient rivals, the first prong of the *Brooke Group* test forces courts to determine that the pricing strategy being complained of actually did cause, or at least could have caused, firms to exit or not enter the market.

The second requirement of the *Brooke Group* test demands that actual consumer harm have occurred as a result of the alleged predation. In adopting this recoupment requirement, the Court recognized that unsuccessful attempts at predation (i.e., charging below-cost prices without the possibility of recouping the ensuing losses) actually help consumers by allowing them to purchase the predator's goods or services at a lower price.[65] Despite this apparent boon to consumers, some argue that below-cost prices should be illegal even if recoupment is not possible because the predation may injure the alleged predator's competitors.[66] The Supreme Court has discounted this idea however, indicating that "[i]t is axiomatic that the antitrust laws were passed for 'the protection of *competition*, not *competitors*.'"[67]

Brooke Group ultimately requires courts to hold alleged predators liable only if: (1) their pricing will have an exclusionary effect on the market due to below-cost pricing, and (2) consumers will likely be harmed by recoupment through future above-normal prices. Barring strategic concerns that are beyond traditional economic analysis,[68] these requirements provide an economically sound, albeit defendant-friendly, test for determining liability in predatory pricing cases.

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[62] From a policy standpoint, protecting less efficient firms is illogical. *See* CASE & FAIR, *supra* note 39, at 31 ("Production efficiency is a state in which a given mix of outputs is produced at least cost . . . . Resources are not going unused, and there is no waste."). The overall purpose of the market system is to allocate resources as efficiently as possible. Protecting inefficient firms is counter to that purpose and results in waste of resources. Note also that short-run, and not long-run, profit maximization is highlighted by this price/cost analysis:

> In economic usage the "short-run" considers a time period during which a firm chooses how much to produce out of a given plant. By contrast, the "long run" refers to a time period over which the firm can select plant size and perhaps build a larger or smaller plant than its current one.

AREEDA & HOVENKAMP, *supra* note 4, ¶ 735a, at 364–65.

[63] As with all of these economic conclusions, they are the result of traditional economic analysis—which does not take into account strategic behavior. *See generally* Bolton et al., *supra* note 4 (proposing an approach that does take into account strategic behavior).

[64] Recall from Section II.B that it is the exercise of monopoly power (obtained through the predatory pricing policy) to charge monopoly prices that is the evil, not the low prices themselves.

[65] Brooke Group Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 224 (1993) (recognizing that "unsuccessful predation is in general a boon to consumers").

[66] ABA MONOGRAPH NO. 22, *supra* note 36, at 37–38 (describing the view that that the antitrust laws should protect the competitive process and thus competitors themselves).

[67] *Brooke Group*, 509 U.S. at 224 (citing Brown Shoe Co. v. United States, 370 U.S. 294, 320 (1962)).

As alluded to earlier,[69] the *Brooke Group* decision seems to have placed insurmountable obstacles in the way of predatory pricing plaintiffs. In fact, since the 1993 decision, no plaintiff has won a predatory pricing case in federal court.[70] Despite the apparent futility in bringing predatory pricing claims, plaintiffs' lawyers and government antitrust enforcers continue to seek new ways around the difficult requirements outlined by the *Brooke Group* decision.[71] This attempted navigation has involved defining new measures of cost to use in the below-cost pricing test required by the *Brooke Group* decision. By using cost definitions that increase the cost side of the below-cost pricing analysis,[72] plaintiffs hope to defeat *Brooke Group*'s first hurdle to proving liability.[73]

C. COST CALCULATIONS

The Supreme Court did not indicate in *Brooke Group* what specific costs are relevant for use in the below-cost pricing analysis.[74] The Court did suggest, however, that the appropriate cost is some measure of incremental cost.[75] Incremental costs, which economists often call marginal costs, are

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[68] *See supra* note 8 (describing some potential "strategic concerns"). According to the Supreme Court's dicta, these strategic concerns are also "beyond the practical ability of a judicial tribunal" to ascertain accurately. *Brooke Group*, 509 U.S. at 223; s*ee also supra* note 57 (describing the Supreme Court's apparent attitude toward nontraditional economic models with respect to below-cost pricing).

[69] *See* Section I (highlighting the difficulties faced by plaintiffs under the *Brooke Group* test).

[70] Bolton, et al., *supra* note 4, at 2258–59.

[71] *See* United States v. AMR Corp., 140 F. Supp. 2d 1141 (D. Kan. 2001) (involving a new approach by the DOJ to include avoidable asset transfer costs in the below-cost pricing test).

[72] The below-cost pricing test is essentially a balancing test with price on one side and costs on the other. Thus, there are two possible ways to improve the likelihood of proving below-cost pricing: either decrease the price, or increase the costs. Because the price side is beyond a plaintiff's control (the predator's prices are set by the predator itself), a plaintiff's only option is to increase the cost side. Therefore, a plaintiff wants to convince the court to include as many costs as possible in the analysis.

[73] *See generally AMR*, 140 F. Supp. 2d at 1141 (representing an attempt by the DOJ to survive the *Brooke Group* test by including avoidable asset transfer costs in the analysis).

[74] *Supra* note 12.

[75] *See* Brooke Group Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 223 (1993) (indicating that earlier cases involved questions of pricing "above some measure of incremental cost") (citations omitted); *see also* AREEDA & HOVENKAMP, *supra* note 4, ¶ 723d2 n.37, at 280:

> Incremental cost, which generally means marginal cost, is the additional cost that a firm incurs when it increases output by an additional unit, adds a new product, or

normally defined as the increased cost associated with a one-unit increase in output.[76] The Court's dictum, suggesting use of incremental costs, is not surprising; Areeda and Turner highlighted incremental costs when they formulated their test in 1975.[77] At the time of *Brooke Group*, the Areeda-Turner approach was widely accepted as an appropriate below-cost pricing test to use in predatory pricing analysis.[78] What Areeda and Turner recognized, and the Supreme Court failed to address, however, was that many incremental costs present an extremely difficult calculation problem.[79] This difficulty led Areeda and Turner to adopt an approach somewhat different from the one suggested in dicta by the Supreme Court.

1. The Areeda-Turner Cost Test

The Areeda-Turner test was the first below-cost pricing test to receive broad judicial acceptance.[80] In formulating their test, Areeda and Turner first recognized that a competitive, "profit-maximizing firm . . . [will] attempt to maximize profits or minimize losses in the short run . . . by producing where marginal cost equals price."[81] The authors also noted that

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> expands output in a similar fashion. For example, the wholesale bakery going from 100 loaves per day to 125 loaves per day bears an incremental cost equal to the additional ingredients, utilities, labor, and other expenses needed for that particular output increase.

[76] Thus, if making ten widgets costs $50, and making eleven widgets costs $55, the incremental (marginal) cost of the one-unit increase from ten to eleven is $5.

[77] *See* Areeda & Turner, *supra* note 13, at 703 (discussing marginal (incremental) costs).

[78] *See* Bolton et al., *supra* note 4, at 2251 (explaining how the "Areeda-Turner rule had an immediate impact on the courts").

[79] *See infra* note 84 and accompanying text (noting that Areeda and Turner recognized the difficulty of correctly measuring marginal cost).

[80] Bolton et al., *supra* note 4, at 2250–51.

[81] Areeda & Turner, *supra* note 13, at 703; *see also* AREEDA & HOVENKAMP, *supra* note 4, ¶ 735d, at 372:

> A perfectly competitive firm always maximizes profits (or minimizes losses) by producing that output at which its marginal cost equals the market price. This occurs because the perfectly competitive firm accepts the market price as given because the firm is by definition too small to affect market price by any variations in output. Accordingly, its incremental or marginal revenue from selling any additional unit of output is equal to the market price itself. Thus, when price is equal to marginal cost, changes in output will reduce profits.

(footnote omitted).

To understand why setting price equal to marginal cost yields the profit maximizing level of output, consider the following figure:

a "firm that is selling at a shortrun profit-maximizing (or loss-minimizing) price is clearly not a predator."[82] Based on this premise, Areeda and Turner "concluded that marginal-cost pricing is the economically sound division between acceptable, competitive behavior and 'below-cost' predation."[83] Thus, according to their initial conclusion, an alleged predator should be

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Figure 1 represents the marginal cost faced by a normal competitive firm. The vertical axis represents the price per unit and the horizontal axis represents the number of units of output. P represents the market price that the firm can charge in a competitive market. Notice that at output level Q1, the price is higher than marginal cost. At this point on the figure, the price of the Q1st unit of output is higher than the additional cost of producing that unit. Therefore, in order to maximize profits, the firm should continue to produce more than Q1 units because doing so will result in a net gain in profit. At Q3, however, the marginal cost of producing that unit is greater than the price that can be charged for it. Thus, the firm will lose money by selling the Q3rd unit. The firm should decrease the quantity produced until the price equals the marginal cost. When P = MC, the firm will be at the breakeven point between Q1 and Q3—it cannot increase profit by increasing or decreasing output.

[82] Areeda & Turner, *supra* note 13, at 703 (stating that "[a] necessary . . . condition of predation is the sacrifice of shortrun profits").

[83] *Id.* at 716. Areeda and Turner explained:

> By definition, a firm producing at an output where marginal cost exceeds price is selling at least part of that output at an out-of-pocket loss. It could eliminate that loss by reducing its output or, where the highest obtainable price is below average variable cost at all levels of output, by ceasing operations altogether.
>
> We have concluded . . . that marginal-cost pricing by a monopolist should be tolerated even though losses could be minimized or profits increased at a lower output and higher price, for the reasons, among others, that marginal-cost pricing leads to a proper resource allocation and is consistent with competition on the merits.

Id.

held liable only if the firm's price is less than its marginal cost (P < MC).

Despite this "economically sound division," however, Areeda and Turner recognized that marginal cost "cannot readily be inferred from conventional business accounts, which typically go no further than showing observed average variable cost."[84] Because of this difficulty, Areeda and Turner argued that average variable cost be used by courts as "an indicator of marginal cost."[85] Although average cost will not normally equal marginal cost, they believed it provided "a useful surrogate for predatory pricing analysis."[86] Thus, the final test adopted by Areeda and Turner requires that the price the alleged predator charges for a product be less than the firm's average variable cost of producing that product (P < AVC) for liability to be assigned.[87]

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[84] *Id.* Variable costs are normally defined as those costs that change as output changes, as opposed to fixed costs that do not change when output changes. The average variable cost (AVC) of production, therefore, is the total variable cost (TVC) divided by the total output (Q): (AVC = TVC/Q). For example, if a firm builds cars, variable cost will include the cost of steel, paint, and tires because these costs all increase when the firm produces more cars and decrease when the firm produces less. Fixed costs represent the opposite of variable costs. In the car-manufacturing example, fixed costs might include the cost of the manufacturing plant and the CEO's salary. These costs are fixed because they normally will not change as output changes.

[85] *Id.*

[86] *Id.* at 718. Areeda and Turner explained:

> The consequences of substituting average variable cost for marginal cost depend on the relationship between the two cost measurements . . . : marginal cost will be equal to average variable cost when the latter is constant, less when it is declining, and greater when it is rising. By reference to the marginal-cost standard, accordingly, reliance on average variable cost may be identical, more prohibitive, or more permissive.
>
> There is no a priori reason to expect any particular firm to be operating at the point where marginal cost equals average variable cost, but when the two costs measures are identical over the relevant range of output, employing one as a proxy for the other plainly raises no difficulties.
>
> [W]henever a firm can reduce unit variable cost by expanding output, a price at average variable cost must exceed marginal cost. Although an average variable cost standard is more prohibitive in these circumstances, it is the correct test on principle, since a firm that sells below its average variable cost is clearly not loss-minimizing. At a price less than average variable cost the firm is earning no return and could incur fewer losses by ceasing operations. The primary nonpredatory justification for prices below average variable cost is that the firm is just starting up and has not yet reached expected production levels. Firms in this situation, however, will not be in violation of a rule that prohibits prices below reasonably anticipated average variable cost.
>
> When marginal cost exceeds average variable cost, adopting the latter as the standard runs the risk of allowing a firm to sell at a price below marginal cost while meeting the average variable cost standard . . . . Marginal cost is likely to be higher than average variable cost only when output nears the firm's optimum. When capacity is thus strained, predation is especially unlikely, since the loss of profits would be most severe and new demand could not be easily absorbed by the predator.

Id. at 717–18 (footnotes omitted).

2. Baumol's Areeda-Turner Gloss: The Average Avoidable Cost Test

As a result of Areeda and Turner's broad influence, many courts began to use average variable cost when implementing the *Brooke Group* below-cost pricing test.[88] After a court adopts the Areeda-Turner test, however, an important question remains: What costs constitute the relevant variable costs to use in applying the test? Areeda and Turner advocated using the standard definition of variable cost, which defines variable costs as those costs that change as the amount of output produced changes.[89] In many cases, this definition will result in an accurate measure of the appropriate costs.[90] In certain circumstances, however, what economists normally consider variable costs will not include all of the costs relevant to determining the exclusionary effect of a predatory scheme.[91] For example, consider a firm whose cost structure is such that, at its predation price and output level, marginal cost is higher than average variable cost. In this situation, a rule allowing price to be set equal to average variable cost "runs the risk of allowing a firm to sell at a price below marginal cost [(the 'correct' below-cost pricing cutoff identified by Areeda and Turner)] while meeting the average variable cost standard [(the 'surrogate' standard)]."[92] Thus, when a firm's marginal cost is greater than its average variable cost, a successful, exclusionary predatory pricing scheme can still survive the Areeda-Turner test.[93] The use of average avoidable cost—a "close relative[]"[94] of average variable cost—alleviates this problem.[95]

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[87] Areeda & Turner, *supra* note 13, at 709–18. Areeda and Turner outlined their final cost test as follows:

> On principle, we conclude that:
>
> A shortrun profit-maximizing (or loss-minimizing) price is nonpredatory even though below average cost.
>
> A price at or above average cost should be deemed nonpredatory even though not profit-maximizing in the shortrun.
>
> A price at or above reasonably anticipated shortrun marginal and average variable costs should be deemed nonpredatory even though not loss-minimizing in the shortrun.
>
> Unless at or above average cost, a price below reasonably anticipated (1) shortrun marginal costs or (2) average variable costs should be deemed predatory, and the monopolist may not defend on the grounds that his price was "promotional" or merely met an equally low price of a competitor.
>
> Recognizing that marginal cost data are typically unavailable, we conclude that:
>
> A price at or above reasonably anticipated average variable cost should be conclusively presumed lawful.
>
> A price below reasonably anticipated average variable cost should be conclusively presumed unlawful.

Id. at 732–33.

[88] Bolton et al., *supra* note 4, at 2250–56 (describing the impact that Areeda and Turner's article had on the courts).

[89] Areeda & Turner, *supra* note 13, at 700 ("Variable costs, as the name implies, are costs that vary with changes in output."). For a more complete description of variable costs, see *supra* note 84.

[90] *See supra* note 86 (outlining why variable cost, as typically defined, is an appropriate cost to use in determining below-cost pricing).

[91] *See infra* note 93 and accompanying text (explaining why the normal average variable cost test does not always result in an accurate below-cost pricing determination).

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[92] Areeda & Turner, *supra* note 13, at 718. Such a relationship might look like Figure 2:

Looking at Figure 2, assume that a firm's predation price is such that it produces at level $Q_{\text{Predation}}$. At this output level, Marginal Cost is greater than Average Variable Cost (MC > AVC). Therefore, under such a scenario, a price set at AVC (which the Areeda and Turner test will find non-predatory) is actually exclusionary and may result in a successful predator being found not liable. Areeda and Turner were not particularly worried about this potential problem, however, because they thought such situations were rare. *See supra* note 86 (explaining why Areeda and Turner believed this problem would rarely arise).

[93] Areeda and Turner recognized this flaw in their test. Nonetheless, they concluded that average variable cost was the best available substitute measure for determining below-cost pricing because:

> [m]arginal cost is likely to be higher than average variable cost only when output nears the firm's optimum. When capacity is thus strained, predation is especially unlikely, since the loss of profits would be most severe and new demand could not be easily absorbed by the predator. Moreover, given the relatively rare occurrence of predatory pricing, we believe that a slightly permissive rule is acceptable . . . .

Areeda & Turner, *supra* note 13, at 718.

[94] Baumol, *supra* note 10, at 53.

[95] *See* AREEDA & HOVENKAMP, *supra* note 4, ¶ 740d3, at 435 ("In considering which costs are variable, the economically correct approach is to identify those costs that can be *avoided* if the predator reduces its output or ceases production."); *see also* Baumol, *supra* note 10

Avoidable costs are defined as "those costs that can be *avoided* if the predator reduces its output or ceases production."[96] Because the predator can avoid these costs by choosing to not predate, they are relevant to the predator's decision to proceed with its predation plan:

> For example, suppose a truck depreciates with use and lasts precisely 100,000 miles. Someone engaged in predatory pricing of delivery services . . . can avoid using the truck, or can use it less, by selling less. That makes it a variable cost for predatory pricing purposes—a fact we take into account by considering use depreciation as a variable cost. Indeed, some goods generally characterized as fixed costs should be considered as variable if the predator can avoid their use by raising its price and selling less.[97]

The benefits of using average avoidable cost instead of average variable cost to identify predatory pricing were first presented in Professor William J. Baumol's influential 1996 article, *Predation and the Logic of the Average Variable Cost Test*.[98] In forming his conclusion, Baumol first recognized the value of the Areeda-Turner rule: "Any price above the pertinent average variable cost for the output quantity in question cannot be predatory because it can never cause the exit (prevent the entry) of an efficient, profit-seeking rival."[99] Despite this virtue of the Areeda-Turner test, Baumol further recognized that such a rule is rather vague because it "has not shown what average variable cost is relevant."[100] Stressing that the relevant inquiry is whether the predator's pricing policies are exclusionary, Baumol concluded that a predator can only drive an equally efficient rival firm out of the market if the predator sets its price below the costs that the rival can avoid by exiting the market.[101] These avoidable costs, therefore, are relevant to the predation determination because they determine how exclusionary a pricing scheme will be.[102]

To see why pricing below avoidable cost is exclusionary, consider a market consisting of firms A (the predator) and B (the prey). The truly relevant cost for predatory pricing purposes (i.e., the cost that will determine if B exits the market), is firm B's average avoidable cost (AAC_B).

(explaining why average avoidable cost is the economically appropriate cost measure for a predatory pricing test).

[96] AREEDA & HOVENKAMP, *supra* note 4, ¶ 740d3, at 435; *see also* Baumol, *supra* note 10, at 56 (defining avoidable costs to include variable costs, including "all fixed costs that are not sunk, so that they can be escaped if the firm exits from the market").

[97] AREEDA & HOVENKAMP, *supra* note 4, ¶ 740d3, at 435.

[98] Baumol, *supra* note 10, at 49.

[99] *Id.* at 57.

[100] *Id.*

[101] *Id.* at 58.

[102] *See supra* text accompanying note 101 (explaining why such costs are relevant under the avoidable cost approach).

If B can charge a price above AAC_B, it will cover some of its sunk costs and will want to remain in the market.[103] Therefore, in order for a price to be low enough to drive B out of the market, it must be less than AAC_B. Next, note that traditional predatory pricing theory is only concerned with predation against firms that are at least as efficient as the alleged predator (because a more efficient firm may be able to drive a less efficient one out of business even without predatory practices).[104] Given this fact, if one assumes that firm B is at least as efficient as firm A ($AAC_A \geq AAC_B$), then if firm A sets price P_A greater than or equal to its own average avoidable costs (AAC_A), P_A cannot drive firm B out of the market ($P_A > AAC_A \geq AAC_B$).[105]

The implications of this proposed "avoidable cost approach" are two-fold. First, because the approach takes into account all of the costs that are relevant to a firm's decision to exit (or not enter) a market, the avoidable cost approach includes all of the relevant costs of predation in the below-cost pricing inquiry.[106] Second, because this approach expands the possible array of costs included in the below-cost pricing test, it improves plaintiffs' chances of proving below-cost pricing.

IV. THE UNIQUE PROBLEM OF TRANSFERABLE ASSETS: UNAVOIDABLE COSTS ABOUND

A. *IDENTIFYING AND DEFINING THE PROBLEM*

If adopted, the average avoidable cost test could have a dramatic effect on predatory pricing cases. By increasing the costs used to determine whether below-cost pricing has occurred, the avoidable cost approach may significantly increase plaintiffs' chances of proving the below-cost pricing required by the first prong of the *Brooke Group* test. The effect of the avoidable cost approach will be most acute, however, in cases involving assets that are transferable between markets. Because of their transferability between geographic locations or within product space, the use of transferable assets often creates much larger amounts of avoidable costs for the alleged predator than do non-transferable assets.[107] These increased avoidable costs will be particularly large in cases where the alleged predator transfers assets from profitable markets to less profitable ones, resulting in significant amounts of lost profit. Such profit losses are an avoidable cost of predation, and because they can have an exclusionary effect on the market, the avoidable cost approach will take them into account when determining if below-cost pricing has occurred.[108]

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[103] *See supra* text accompanying note 61 (explaining why a firm will continue to produce if it covers some of its sunk costs).

[104] *See supra* note 62 (explaining why protecting firms that are less efficient than the alleged predator is not a goal of antitrust policy).

[105] Baumol, *supra* note 10, at 56–59.

[106] *Id.*

[107] The cost of deploying an asset into a market is an avoidable cost of predation if the asset was utilized in that market as a result of the predatory scheme. AREEDA & HOVENKAMP, *supra* note 4, ¶ 740d3, at 437 (stating that "the 'cost' of predation . . . [includes] the cost of deploying an asset into the predatory market that would not be deployed there in the absence of predation"). When transferable assets are involved, the avoidable cost of deploying the asset includes costs which are not normally included as an avoidable cost—such as lost profits given up as a result of the asset transfer. *See infra* note 112 and accompanying text (explaining why

One caveat should be noted with respect to lost profits under the avoidable cost approach. In his article on avoidable cost, Baumol concludes that revenues[109] lost *from price decreases* should not be included in calculating avoidable cost because they do not "constitute[] a threat to the existence of an efficient rival."[110] He also points out, however, that the avoidable cost of utilizing "owner-supplied inputs" should be included because "a price . . . that does not cover the opportunity cost of that firm's avoidable investment [(i.e., owner-supplied inputs)] can constitute a threat to a more efficient rival."[111] Transferable assets represent an owner-supplied input, and lost profits from transferring such assets represent an avoidable cost of deploying those assets. Therefore, while lost profits normally will not be included under Baumol's avoidable cost approach, because transferable assets constitute an "owner-supplied input" it is logical to include lost profits from asset transfer when applying the avoidable cost test in a *Brooke Group* analysis.[112]

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lost profits (an avoidable cost of asset transfer) are included under the avoidable cost approach when asset transfer is involved but not when they result merely from a decrease in price).

[108] *See infra* note 112 (explaining why profits lost through asset transfer are exclusionary).

[109] Note that: Profit = Total Revenues – Total Costs. Hence, *ceteris paribus*, lost revenues ultimately correspond with lost profits.

[110] Baumol, *supra* note 10, at 69.

[111] *Id.* at 71.

[112] To see why profits lost from asset transfer are exclusionary, consider a market consisting of two firms: predator and rival. First, note that profit is a function of total revenue and total cost (i.e., Profit = Total Revenue – Total Cost). Thus, a loss of profit can occur either via a decrease in total revenue or an increase in total cost. Next, recall that revenue is a function of price and quantity sold (i.e., Revenue = Price x Quantity Sold). For a predatory pricing scheme to be successful, price must decrease and the output must increase. *See supra* Section II.A–B (describing the economic theory behind predatory pricing); AREEDA & HOVENKAMP, *supra*, note 4, ¶ 729e1, at 354. Thus, under a typical predatory pricing scheme, the predator's profits may decrease for two reasons: (1) the decrease in price results in lower revenues, and/or (2) total cost increases because new investment must be made to increase output. Given these relationships, the question is whether a given loss of profits is exclusionary.

On the total revenue side of the equation, Baumol correctly concludes that decreases in revenue due to a decrease in price should not be included in the avoidable cost test. Baumol, *supra* note 10, at 70. A decrease in price, standing alone, does not require the predator's rival to provide any funds or to increase investment. *Id.* at 71. Therefore, lost profits due to the price decrease are not exclusionary.

On the total cost side of the equation, however, additional investment (i.e., more assets and inputs) may be needed to increase output (which necessarily accompanies the decrease in price). *See* AREEDA & HOVENKAMP, *supra* note 4, ¶ 729e1, at 354 ("Predatory pricing

Because of the necessary inclusion of lost profits, cases involving predators that utilize transferable assets are the most likely to be significantly affected by the proposed avoidable cost approach. Note, however, that the production usage of most assets can be transferred to produce more than one product.[113] Given this realization, it becomes apparent that almost any asset may be transferable,[114] and therefore virtually all predatory pricing cases will likely involve some type of transferable asset. Thus, identifying what transferable assets are and what avoidable costs they create is crucial to understanding the broad potential reach of the avoidable cost test. To that end, the rest of this Note examines the avoidable cost approach within the context of avoidable asset transfers.

For the purposes of this discussion, consider two types of transferable assets: (1) geographically transferable assets (GTAs), and (2) multiple product transferable assets (MPTAs). GTAs are assets that easily move between different markets in different geographic locations. Airplanes are an obvious example of GTAs.[115] To this point, GTAs have been the primary type of transferable asset considered by researchers and courts.[116]

MPTAs are assets that quickly transfer from the production of one good to the production of another. Although called transferable assets, it is actually the production usage of MPTAs that transfers and not the asset itself. These assets transfer within product space, instead of geographical space. For example, a machine that makes brand-name cigarettes is an MPTA if it can be altered (or possibly not altered at all) to produce generic cigarettes.[117] The transfer must be quick enough, however, to make it an

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requires the predator to increase its output during the predatory period. Simply announcing a price cut without increasing output does no good, for the predator will run out of inventory and be unable to steal sales."). "If additional investment is required to provide that output, *the rival, too, will have to provide such funds*." Baumol, *supra* note 10, at 70 (emphasis added). If the predator transfers these assets (owner-supplied inputs) to increase production instead of buying new assets, the cost of transfer (e.g., the profits lost from switching the asset to its new use) represents the cost of deploying the asset for the purpose of predation. The predator's rival must match this investment. Therefore, lost profits due to asset transfer are exclusionary (at least up to the point where the lost profits equal the rival's cost of obtaining the same assets).

[113] *See infra* notes 117–22 and accompanying text (defining and explaining the concept of multiple product transferable assets (MPTAs)).

[114] *See infra* note 119 and accompanying text.

[115] For an example of a predatory pricing case where the transferability of airplanes between different geographic markets is an important issue, see United States v. AMR Corp., 140 F. Supp. 2d 1141 (D. Kan. 2001).

[116] *See, e.g.*, *id.* at 1195–1204 (examining the transferability of airplanes between locations); AREEDA & HOVENKAMP, *supra* note 4, ¶ 740d3, at 435–37 (discussing the transferability of trucks and airplanes); Baumol, *supra* note 10, at 59 (examining avoidable costs of operating airplanes, such as the pilot's salary and the fuel bill).

[117] Currently, no predatory pricing cases have discussed this type of transferable asset. This cigarette example is derived from the *Brooke Group* facts. In *Brooke Group*, the plaintiff began marketing generic cigarettes at a deeply discounted price. Brooke Group Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 209 (1993). The defendant eventually decided to

avoidable cost of predation. A transfer that takes longer than the predation period cannot be avoidable for purposes of predation; and if the transfer cost is not avoidable, then it is irrelevant to the below-cost determination.

Virtually all authors have ignored (or perhaps failed to recognize) MPTAs in discussing transferable assets. The easier identification of GTAs may be the reason for this phenomenon.[118] Nevertheless, MPTAs represent a far greater number of possible transferable asset predatory pricing cases because any asset that can be used to produce more than one good, by definition, represents a potential predatory transfer.[119] In addition, unless an asset has unlimited capacity, using the asset (or a portion of the asset's capacity) to produce one good necessarily means that a firm cannot use the asset (or the same portion of the asset's capacity) to produce another good. Thus, every use of an asset includes an avoidable opportunity cost—the asset (or the portion of the asset's capacity that was used) could have been used to produce something else. If this switch in the asset's production usage was transferred from one good to another for the purpose of predation, the foregone opportunity is an avoidable cost of predation and will be included

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enter the generic market as well, and a price war began. *Id.* The plaintiff sued the defendant claiming predatory pricing in the generic cigarette market. Although the court did not address transferable assets (indeed, the issue of transferable assets and avoidable costs was not widely recognized yet), the situation represents a perfect example of an asset that is easily transferred between production lines. If a cigarette machine can be quickly altered to produce generic cigarettes instead of brand-name cigarettes, the asset is an MPTA. Such a transfer is quite possible in this instance, because the major difference between generic and brand-name cigarettes is primarily packaging and ingredients. Presumably, the same machines used to produce brand-name cigarettes can be used to produce generic cigarettes.

The fact that brand-name and generic cigarettes might essentially be identical (from a production standpoint) is not relevant. Despite the similarities in the products, each sells in a separate submarket of the overall cigarette market. Each sells at a different price (brand-name at a high price, and generic at a low price). Therefore, assuming the costs of producing both types of cigarette are the same, and assuming that the generic cigarettes are produced by transferring production from brand-name to generic (as opposed to producing generic cigarettes using excess capacity), using the machine to produce generic cigarettes instead of brand-name cigarettes creates a certain amount of avoidable costs (lost profits from producing the lower priced generic cigarettes instead of the higher priced brand-name cigarettes) for which the avoidable cost test will account.

[118] The traditional notion of markets that exist in different geographical locations lends itself to identification of GTAs (e.g., it is not difficult to imagine a truck moving from a local market in Alaska to a different local market in South Dakota).

[119] Suppose asset X can be used to produce either widgets or gidgets (but not both at the same time). Because asset X can be used for more than one purpose, it is an MPTA (it can be used to produce more than one good). The same is true of any asset that can be used to produce multiple products. Furthermore, a firm owning asset X can choose to produce either widgets or gidgets, but must incur the opportunity cost of making that choice. Thus, if the firm chooses to produce widgets, it must necessarily forgo the profits it would have earned if it had produced gidgets. If the decision to use asset X to produce widgets was made in order to predate, the lost profits (the opportunity cost of choosing widgets) is an avoidable cost of predation.

in the below-cost pricing determination under the avoidable test.[120]

Note also that when transferable assets are involved, normal variable cost does not include all of the relevant economic costs of moving the assets (in the case of GTAs) or altering the good produced by those assets (in the case of MPTAs) for purposes of predation.[121] For example, if a firm transfers an asset from the production of a highly profitable good to a less profitable one, variable cost will not recognize the lost profits associated with that transfer of production. Yet, those lost profits are avoidable and are relevant to a predator's decision to predate.[122]

Finally, for the sake of clarity, one last way to think of transferable assets is to consider them as fixed costs that become variable because of their transferability. Normally, the purchase cost of an airplane or a machine used in manufacturing is considered a fixed cost because the cost of the asset does not change as output changes. Because these assets are not limited to a single use or location, however, the costs of using those assets for any specific use are variable (or avoidable). In essence, when an asset has multiple uses, opportunity costs of using that asset exist for any particular use—including predation.[123] Therefore, costs such as the depreciation of the asset, the costs of usage, and any lost revenue associated with the transfer of the asset are economically relevant to calculating the correct cost of the alleged predation.[124] "The central point is that the 'cost' of predation in such cases includes the cost of deploying the asset into the predatory market that would not be deployed there in the absence of predation."[125]

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[120] The avoidable cost of the forgone opportunity may include the costs of deploying the asset and any lost profits that result from transferring the asset from a more profitable use.

[121] *See* AREEDA & HOVENKAMP, *supra* note 4, ¶ 740d, at 431–32 ("Inasmuch as the purpose of any predatory pricing rule is to prevent anticompetitive behavior, the cost-based rules must focus on the costs that the defendant should have considered when setting the allegedly predatory price.").

[122] *Id.* ¶ 740d3, at 437 (highlighting that the relevant costs "may consist of both the cost of deploying the asset into the market subject to predation, and the lost revenue in the market from which it might have been removed"); *see also supra* note 112 and accompanying text (explaining why lost profits from asset transfer are included in the avoidable cost test).

[123] *See* AREEDA & HOVENKAMP, *supra* note 4, ¶ 740d3, at 435–36:

> [For example], consider a claim that an airline that has an established position in a certain hub airport has dramatically increased its output [(i.e., has added flights to this hub)] and has reduced its price in response to entry by a new carrier. . . .
>
> [W]hen the question is whether the airline's rate structure as a whole is below relevant costs, then the airplane itself must be considered a variable cost item. First, it is subject to use depreciation in proportion to the number of hours it flies. Second, its cost is avoidable because it can readily be transferred to another market if not needed in the market in question. Of course, to the extent the aircraft is a variable cost, all expenses for servicing, operating, and storing it are variable as well.

[124] *Id.* ¶ 740d3, at 435–37.

[125] *Id.*

B. UNITED STATES V. AMR CORP.: *THE FIRST MAJOR ATTEMPT TO INCLUDE THE AVOIDABLE COSTS OF ASSET TRANSFER*

The first case to broadly examine whether the costs associated with asset transfer constitute an appropriate cost to include in calculating below-cost pricing is *United States v. AMR Corp.*[126] In *AMR*, the government charged American Airlines with predatory pricing in several markets in which new market entrants threatened American's market share at various airport hubs.[127] When a new entrant began offering a small quantity of flights at a discounted price in markets where American had a significant presence, American responded by matching the entrant airline's lower price and increasing its quantity of flights.[128] The avoidable costs associated with asset transfer became important because American provided the increased quantity of flights by transferring airplanes from more profitable routes to the less profitable, new entrant routes. Because of the aircraft transfer, American incurred significant profit losses in addition to the cost of aircraft usage, fuel, and labor. American could have avoided these costs if not for the competitive measures it took (i.e., the alleged predation).[129]

In its effort to prove *Brooke Group*'s requisite below-cost pricing, the government attempted to include the avoidable costs of transferring the aircraft from more profitable routes to less profitable ones.[130] The district court rejected the avoidable cost test outright, and found American not liable.[131] Because *AMR* is currently on appeal, however, the issue of avoidable costs and transferable assets is still alive and undetermined.[132] Therefore, an examination of the relevant costs and benefits of this new approach is in order.

V. PRACTICAL PROBLEMS ASSOCIATED WITH INCLUDING AVOIDABLE ASSET TRANSFER COSTS IN PREDATORY PRICING CASES

Because the avoidable cost approach takes into account all of the costs relevant to a firm's decision to exit a market, it is the most economically accurate approach for calculating below-cost pricing.[133] The most economically accurate rule is not, however, always the best legal rule. Concerns such as the ease of application, the relative effects on the parties, and general public policy reasons may dictate that a rule that is economically sound in theory may not be appropriate in certain situations. Such is the case here. A number of serious problems arise when attempting to include the avoidable costs of asset transfer in a *Brooke Group* below-cost pricing test. These problems are of such a high magnitude that they make the inclusion of these costs highly speculative and unwise in most cases.

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[126] 140 F. Supp. 2d 1141 (D. Kan. 2001). Other cases, such as *Transamerica Computer Co., Inc. v. International Business Machines Corp.*, 698 F.2d 1377 (9th Cir. 1983), have looked at some individual avoidable costs, but have never considered them in the broad context that *AMR* does.

[127] *AMR*, 140 F. Supp. 2d at 1145.

[128] *See supra* note 20 (explaining American's competitive strategy in regard to the new entrants).

[129] *See supra* note 21 (discussing American's profit losses).

[130] *See supra* note 22 (discussing the government's claim).

[131] *AMR*, 140 F. Supp. 2d at 1218. For a discussion of the court's reasoning, see Section V.A.

[132] Brief for Appellant, United States v. AMR Corp., 140 F. Supp. 2d 1141 (D. Kan. 2001) (No. 01-3202), *available at* www.usdoj.gov/atr/cases/f10800/10856.htm.

[133] *See supra* note 121 and accompanying text (discussing which costs are economically relevant).

In *AMR,* the court identified three general grounds for rejecting the inclusion of avoidable costs related to transferred assets.[134] Although one of these grounds is based on an incorrect premise, two of them present sound reasons to reject the inclusion of avoidable asset transfer costs. In addition, several other reasons exist for excluding unavoidable costs in cases involving transferable assets.

A. THE AMR *COURT'S GENERAL REASONS FOR REJECTING THE INCLUSION OF AVOIDABLE ASSET TRANSFER COSTS*

The *AMR* court's primary objection to using an avoidable cost test arose because the court viewed such a test as a "short-run test[] for profit-maximization."[135] In the court's opinion, including the relevant avoidable costs of the lost revenue from transferring airplanes between more and less profitable markets "would effectively condemn as illegal any pricing or capacity decision which would reduce the 'predator's' profits."[136] This conclusion is incorrect. Utilization of the avoidable cost approach in cases involving transferable assets *does* take into account the loss of profits, but it does *not* force a firm to maximize profits.[137] Thus, although lost profits are relevant under the avoidable cost test (when transferable assets are involved), their relevance does not mean that any loss in profits (or failure to maximize profits) is per se illegal. In fact, an alleged predator could sustain large losses in short-run profit and still pass the avoidable cost test. For example, in *AMR*, the lost profits American incurred by moving its planes to less profitable routes are a relevant cost.[138] Yet, the fact that those losses are a relevant cost does not mean that they are completely outcome determinative. If the price American charges is high enough to cover its lost profits and all other avoidable costs, the airline will not be liable under the *Brooke Group* test. Thus, while including avoidable costs does make liability more likely, inclusion does not make every failure to maximize short-run profits illegal (even assuming all other liability requirements are met). Despite the *AMR* court's incorrect conclusion that lost profits are outcome determinative with respect to determining below-cost pricing, however, the court did identify two valid reasons for rejecting the avoidable cost test in transferable asset cases.

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[134] The *AMR* court also found several fact specific reasons in that case to reject the inclusion of the avoidable costs of asset transfer. *AMR*, 140 F. Supp. 2d at 1218. The three reasons outlined in this Section represent problems that will generally be present in most transferable asset cases.

[135] *Id.* at 1201.

[136] *Id.* at 1202.

[137] *See supra* note 112 and accompanying text (explaining why lost profits are only included in the avoidable cost calculation when asset transfer has occurred).

[138] *See supra* note 112 and accompanying text (explaining why lost profits from transferring assets are an avoidable cost).

1. The Calculation Problem

The *AMR* court recognized that it could include avoidable lost profits in the cost calculation only if the court determined what the alleged predator's profits would have been if the assets had not been transferred.[139] In other words, one cannot calculate profits lost due to predation unless one can calculate what the firm's profits would have been during the predation period in the absence of predation (i.e., lost profits caused by predation = profits that could have been earned in the absence of predation - profits actually earned during predation).[140]

Calculating this potential loss of profits is both difficult and speculative. For example, how is the court to determine what prices the firm would have charged without the capacity increase? What quantity would the firm have sold in the absence of the capacity increase? Answers to these questions may be impossible to calculate. Moreover, even if it were possible for a court to estimate such profits, through econometric analysis and the like, such estimates are only as accurate as the person conducting the analysis and the data available. The addition of new entrants to the market further complicates the estimation. Thus, to estimate accurately any profits an alleged predator lost as a result of a predatory scheme, an econometric model must first account for each of the revenue and cost factors that determine the predator's nonpredatory profits (e.g., the nonpredatory price, the nonpredatory quantity sold, the nonpredatory cost). In addition, the model must make these estimations while taking into account *any other factors* that might have significantly changed the alleged predator's profit levels during the predatory period. Potentially relevant factors might include: changes in global, national and/or state economies, changes in the predator itself, changes in the relevant "predatory" market, changes in consumer preferences, and changes in the alleged predator's competitors, just to name a few. In light of the vast array of factors potentially affecting a firm's profits, using econometric and statistical analysis to estimate lost profits requires a model builder to pile estimation on top of estimation, ultimately determining lost profits through a series of assumptions and educated statistical guesses. Creating such estimations is possible, but verifying the accuracy of those estimations likely is not. Therefore, while econometric estimations of lost profits may be useful in some contexts, such as for a company's internal planning or for investment research, basing predatory pricing liability on such estimations is risky. Indeed, in *Brooke Group* the Supreme Court evidenced a decided hesitancy towards assigning predatory pricing liability based on approaches that are "beyond the practical ability of a judicial tribunal to control without courting intolerable risks of chilling legitimate price-cutting."[141] Assigning liability on an econometric estimation of lost profits appears to fall within the ambit of such a concern. Thus, given the high degree of difficulty and speculation involved in estimating lost profits, basing liability on such estimations is unwise—especially in light of possible treble damages.

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[139] United States v. AMR Corp., 140 F. Supp. 2d 1141, 1202 (D. Kan. 2001); s*ee also supra* note 112 and accompanying text (explaining why lost profits due to asset transfer are an avoidable cost, but lost profits from price decreases are not).

[140] *See AMR Corp.*, 140 F. Supp. 2d at 1202:

> [T]he tests do not attempt the impossible task of measuring how American would have performed on the relevant routes without the capacity increase [(i.e., in the absence of predation)], that is, if it had adhered, in the face of vigorous price-cutting competition, to its earlier strategy of continuing to offer relatively fewer seats.

One might argue that this calculation problem can be avoided by using the alleged predator's past profits to estimate[142] lost profits. This solution, however, suffers from an equally severe problem: using past profits to estimate lost profits requires one to assume that markets remain static. As the next Sub-Section explains, such an assumption is unrealistic.

2. The Static Market Assumption Problem

In order to use past profits (made up of both past revenues and past costs) to determine what profits were lost because of the asset transfer, one must assume that all of the relevant markets remained in the exact same state between the predatory and non-predatory time periods being compared.[143] Any change in demand, supply, cost of inputs, etc. will cause this assumption to fail. For example, in the *AMR* case, one has to assume that the cost of fuel, employee salaries, the demand for flights, and the outside supply of flights (i.e., the number of flights provided by other airlines) all remained the same between the periods being compared.[144] The *AMR* court correctly recognized that these assumptions are unrealistic.[145] Yet, the accurate identification of lost profits using past measures of cost and revenue depends on the validity of this static market assumption. Because this assumption will likely be untrue in virtually all cases, relying on it may result in mistaken liability. Furthermore, given the policy concerns about over-zealous predatory pricing policies outlined in Section II.B, inclusion of lost profits from asset transfer in any below-cost pricing test is a dangerous practice.

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[141] Brooke Group Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 223 (1993).

[142] Note the use of the term "estimate," because that is what the court would effectively do in such a case. Calculating the actual profit loss is impossible, but the court could make an educated (or uneducated, depending on your outlook) guess using past profits.

[143] *See AMR*, 140 F. Supp. 2d at 1202 ("Moreover, [the test] assume[s] a static environment as to underlying expenses and the number of passengers flying a given route."). Without the static market assumption, it is impossible to tell if the lost profits are due to the asset transfer or due to some other change in the market.

B. ADDITIONAL REASONS TO REJECT THE INCLUSION OF AVOIDABLE ASSET TRANSFER COSTS

In addition to the problems outlined by the court in *AMR*, inclusion of avoidable asset transfer costs in the *Brooke Group* below-cost pricing test is problematic for three additional reasons. First, including such costs may preclude firms from matching competitors' prices while remaining free from predatory pricing liability.[146] Second, including these costs in the analysis may hinder product innovation.[147] Finally, including these costs actually makes the second prong of the *Brooke Group* test, recoupment, more difficult for plaintiffs to prove.[148]

1. Including the Avoidable Costs of Asset Transfer Will Make It Impossible for Some Firms to Tell the Difference Between Legal and Illegal Price Decreases

Predatory pricing law recognizes a "meeting competition" defense under both the Sherman Act and the Robinson-Patman Act.[149] This defense allows an alleged predator to defeat liability if its pricing policy did no more than match the same price set by a competitor.[150] The rationale for such a rule "begin[s] with the premise that antitrust forces no firm to yield market share to rivals."[151] Whether one agrees with this premise or not, the meeting competition defense also serves another important purpose: it draws a clear line between legal and illegal price cutting that a firm can easily see and adhere to. Despite the benefits of such a clear line, however, ambiguities remain about which prices are legal and which are not. The reason for this ambiguity lies in a lack of uniformity in applying the meeting competition defense.[152]

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[144] *See id.* (identifying some, but not all, of the factors that must remain the same in order to measure lost profits correctly).

[145] *See id.* (describing these assumptions as "dubious").

[146] *See infra* Section V.B.1 (discussing the problems avoidable asset transfer costs create for firms attempting to meet competition).

[147] *See infra* Section V.B.2 (discussing the problems avoidable asset transfer costs create for firms attempting to innovate their products).

[148] *See infra* Section V.B.3 (discussing the recoupment problem created by including the avoidable costs of asset transfer in the below-cost pricing analysis).

[149] AREEDA & HOVENKAMP, *supra* note 4, ¶ 748, at 506.

[150] *Id.*

[151] *See id.* ("Of course, such a defense becomes relevant only after the defendant has been found to have charged prices (1) lower than the relevant measure of costs, and (2) under circumstances that monopoly or oligopoly recoupment is reasonably likely.") (citations omitted).

The lack of uniformity in the application of the meeting competition defense arises largely for two reasons. First, the "application of the defense may differ in Sherman Act and Robinson-Patman Act cases. While the defense in Sherman Act cases is judge made, the Robinson-Patman Act carries its own explicit meeting competition defense."[153] Second, some courts hold that "a seller of name brand or superior goods is not entitled to 'meet' competition by matching the price of a rival for unbranded, house brand, or inferior goods."[154] Thus, firms may be unsure whether the meeting competition defense will apply if they are sued for predatory pricing, and this uncertainty may cause serious problems for firms attempting to determine what competitive pricing measures they can take.

For example, the *AMR* court determined that American Airlines only "matched, and never undercut, the fares of the new entrant."[155] The court also concluded that American's product was essentially identical to that provided by its rivals.[156] As a result, the court granted summary judgment in favor of American.[157] This result, at first glance, seems rather simple and straightforward. If the competitors are using similar aircraft, their respective products (air travel) appear equivalent for meeting competition purposes. The *AMR* case was complicated, however, by the fact that American flew more routes than the new entrants, had a much larger array of connecting flights available for customers, and possibly had "other product differentiation advantages."[158] Thus, American Airlines provided a greater benefit to many customers who wished to fly beyond their first destination.

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[152] *See id.* (noting exceptions to the meeting competition defense).

[153] *Id.*; s*ee also* Clayton Act § 2(b) [as amended by the Robinson-Patman Act], 15 U.S.C. § 13 (2000). The statute reads:

> [N]othing herein contained shall prevent a seller rebutting the prima-facie case thus made by showing that his lower price or the furnishing of services or facilities to any purchaser or purchasers was made in good faith to *meet an equally low price of a competitor*, or the services or facilities furnished by a competitor.

Id. (emphasis added).

[154] AREEDA & HOVENKAMP, *supra* note 4, ¶ 2352b, at 167–68.

[155] United States v. AMR Corp., 140 F. Supp. 2d 1141, 1204 (D. Kan. 2001).

[156] *Id.* at 1208.

[157] *Id.* at 1204.

[158] *Id.* at 1208 ("[T]he United States argues that American 'effectively undercut' its competitors because it not only reduced prices, it also offered a better product at a matching price.").

Does this mean that American's product was actually superior to that of the new entrant? The answer is unclear, and some courts might hold that American's product was superior. This example highlights, therefore, the fact that in many instances firms will be unsure whether they can actually lower prices to meet competition. If the firm does not qualify for the meeting competition defense, or is unsure whether it will qualify, the firm must then price above its relevant costs even if the firm's competitors are charging a lower price.[159] If it fails to do so, the firm subjects itself to possible predatory pricing liability and subsequent treble damages.[160]

Note that this inability to calculate legal price decreases can also occur in predatory pricing cases where no avoidable costs are included in the analysis. The inclusion of avoidable costs, however, will complicate the firm's situation. To see why, recall that a firm wishing to avoid predatory pricing liability should attempt to price above its relevant costs.[161] Under the Areeda-Turner average variable cost test, the firm will be safe if it sets price above its average variable cost. Furthermore, because firms already measure variable costs or can easily calculate them from standard business accounts, most firms probably will not have a difficult time determining what constitutes a safe price and level of output.[162] If average avoidable cost supplants average variable cost as the below-cost pricing standard, however, the established firm may have a much more difficult time calculating a safe price level. Under an avoidable cost regime, a firm unsure of whether the meeting competition defense will apply (and who, as a result, wishes to price above relevant costs in order to avoid potential predatory pricing liability) may face the daunting task of identifying and quantifying each of the avoidable costs it will incur as a result of the price decrease before it can lower its price. This identification presents a potentially Herculean task depending on the variety, number, and complexity of the avoidable costs incurred, and the overall nature of the alleged predator's business. In addition, the problem is once again magnified by the transfer of assets. If the firm transfers assets in order to increase output and correspondingly decrease price, any lost profits from that transfer are considered avoidable costs.[163] Recall from Sections V.A.1 and V.A.2 that it is extremely difficult, and in some cases probably impossible, to accurately measure those lost profits. Given the difficulty of determining the correct avoidable costs, therefore, a firm that uses transferable assets to increase production in a market may find it impossible to lower its price and still avoid predatory pricing liability. This insecurity may force the firm to keep its prices high, even as new competition enters the market and takes away market share. Such a result is counter to the antitrust laws and hurts consumers by keeping prices high in the short run.[164]

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[159] *See supra* Section III.B (discussing the requirements of the *Brooke Group* decision).

[160] *See supra* note 24 (describing treble damages under the antitrust laws).

[161] *See supra* Sections III.C.1–2 and accompanying text (explaining the below-cost pricing test and the various cost measures suggested under the test).

[162] *Cf.* Areeda & Turner, *supra* note 13, at 716 (suggesting the use of variable cost because marginal cost is much more difficult to calculate).

[163] *See supra* note 112 and accompanying text (explaining why lost profits should be included in avoidable cost test only if they are the result of asset transfer).

2. Including the Avoidable Costs of Asset Transfer May Hinder Innovation

In addition to creating difficult calculation problems, the avoidable cost approach might also seriously hinder firms' ability to innovate their products. A firm loses profits when it introduces a new product that cuts into the sales of an already established, profitable product.[165] Because those lost profits are avoidable (by choosing to not phase out the old product), such losses could possibly result in below-cost pricing under the avoidable cost approach.[166]

To see why this problem occurs, consider a firm that wishes to phase out product O (an old product that still retains significant profitability) in order to replace it with product N (a newer, improved product). In this situation, the introduction of N into the market may cut into the sales for product O, thus resulting in a loss of profits due to the decrease in the revenue generated by product O. Because the loss of product O profits is avoidable (i.e., the loss can be avoided by not introducing the new product into the market), this loss represents a relevant cost of predation under the avoidable cost approach.[167] As such, the introduction of an innovative new product into the market could lead to predatory pricing liability for the innovator.

At first, one may find it illogical for a firm to introduce a new product that decreases the profitability of an already profitable product line. There are, however, several reasons why rational firms do just that:

> For example, the ability to offer a fuller line of complementary products may increase the sales of each, either because consumers find advantages in dealing with a single seller or because the fuller line enhances the seller's image. Producing a full line may also permit more efficient organization and utilization of research and development. Finally, even though the new investment might appear to be less profitable than additional investment in the

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[164] *See supra* note 35 and accompanying text (explaining why keeping short-run prices high is counter to the purpose of the antitrust laws).

[165] Even if the new product results in an overall net gain in profits, a certain amount of future profits from the old product will be lost if the new product cuts into the old product's market share.

[166] *See supra* note 122 (explaining when lost profits are an avoidable cost under the avoidable cost approach).

[167] *Supra* note 112.

> [established] line, it is possible that it is rational when the two anticipated rates of return are discounted for risks.[168]

In some circumstances, therefore, introducing new products makes sense even if those new products decrease the profitability of an existing product line.[169]

If courts adopt the avoidable cost approach as a blanket rule for all predatory pricing cases, innovation might be drastically affected. If the firm transfers assets in the process of producing the new product,[170] the profits lost from the old product line are avoidable, and a court utilizing the avoidable cost approach will include them in determining whether below-cost pricing occurred.[171] Furthermore, if the firm charges a lower than normal introductory price for the new product in order to draw initial customers (a legitimate course of action for a legitimate business purpose), a competitor is more likely to bring a possible claim of predatory pricing against the firm.[172] Ultimately, a firm increases its vulnerability to predatory pricing liability by introducing new products under these circumstances, and this increased probability of liability will decrease the incentive to innovate.[173]

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[168] AREEDA & HOVENKAMP, *supra* note 4, ¶ 742e, at 468–70.

[169] This precise situation was examined by the Ninth Circuit Court of Appeals in *Transamerica Computer Co. v. International Business Machines Corp.*, 698 F.2d 1377 (9th Cir. 1983). In *Transamerica*, IBM was accused of predatory pricing in the computer peripherals market. IBM's practice was to introduce new products at a discounted price, "thus losing sales on the old [product] line before the marketability of the old line was completely exhausted." AREEDA & HOVENKAMP, *supra* note 4, ¶ 742e, at 469. Transamerica argued that because profits could still be made from sales of the old product, the profits lost from moving to the new product (which the court termed "impact costs") should be included in calculating whether IBM priced below its costs. AREEDA & HOVENKAMP, *supra* note 4, ¶ 742e, at 469–70.

> The district court quite correctly refused to count such losses as part of IBM's costs of the new product because to do so would create a disincentive to research and innovation and because, in any event, the costs were extremely difficult to calculate. The Ninth Circuit agreed, although it reserved the possibility that it might count such costs in some undefined future case.

Id.

[170] It is likely that the firm will transfer assets to produce the new product, particularly with respect to MPTAs. Because the firm is phasing out the old product in favor of the new one, the firm will have an incentive to transfer existing assets to the production of the new product.

[171] Recall that lost profits are included in the avoidable cost approach only if they are incurred due to asset transfer. *See supra* note 112.

[172] The low price on the new product, coupled with the inclusion of avoidable lost profits, creates a prime situation for a possible predatory pricing case.

[173] Again, the treble damages available for predatory pricing violations can make even a small increase in the likelihood of liability a serious concern.

3. Including the Avoidable Costs of Asset Transfer Improves a Plaintiff's Chances of Proving Below-Cost Pricing, but Decreases the Likelihood of Proving Recoupment

Recall that, in addition to proving below-cost pricing, *Brooke Group* also requires "proof that the predator will be able to raise price above the competitive level (recoupment capability) sufficient to compensate the predator for its predatory investment (recoupment sufficiency)."[174] For the predatory pricing plaintiff, this prong makes including the avoidable costs of asset transfer a double-edged sword. On one hand, including the avoidable costs of asset transfer will increase the probability of proving below-cost pricing. These increased costs, however, also represent an increase in the predator's "predatory investment."[175] Therefore, because the avoidable costs of asset transfer increase the overall cost of predation, including those costs also makes proving recoupment more difficult.[176] In effect, the more expensive the alleged predation is, the more difficult proving recoupment is.

In the simplest mathematical terms, proving recoupment is a function of: (1) the cost of predation (negative factor), (2) the price charged during the recoupment period (positive), and (3) the duration of the recoupment period (positive).[177] If the plaintiff includes the avoidable costs of predation in order to prove below-cost pricing, he or she effectively increases the array of costs included in the analysis, thereby increasing the value of factor (1). To succeed in proving a probability of recoupment, therefore, the plaintiff must prove that the predator will be able to charge a significantly high price over a significantly long period of time (increasing factors (2) and/or (3)). The higher these values need to be, the more difficult it will be to prove probable recoupment.

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[174] Bolton et al., *supra* note 4, at 2255–56; *see* Section III.B (outlining the requirements of the *Brooke Group* decision).

[175] Bolton et al., *supra* note 4, at 2255–56.

[176] *Id.*

[177] Graphically, the predation/recoupment relationship might look like Figure 3:

In Figure 3, the vertical axis represents the amount of profit made or lost, the horizontal axis represents the time period, and the horizontal center line represents the break even point (the point at which profit equals zero). Block A represents the amount of loss incurred from the predation. Block B represents the amount of recoupment that must occur in order to break even following the predation period. If Block A is increased for any reason, Block B must increase by the same amount in order to break even. This can occur either by an increase in price or an increase in the duration of the recoupment period.

Any court that adopts the avoidable cost approach must recognize this conflicting relationship. Failure to attribute avoidable costs to both prongs of the *Brooke Group* test could result in a significant amount of misallocated liability. And given the possible award of treble damages for predatory pricing violations, such mistakes could result in the destruction of innocent, efficient firms—a result completely counter to the purpose of the antitrust laws.[178]

VI. CONCLUSION

Because the avoidable cost approach takes into account all of the costs that are relevant to a firm's decision to exit (or not enter) a market, it is the most economically accurate test for determining below-cost pricing in predatory pricing cases. This conclusion is especially true in cases involving transferable assets, where potentially exclusionary costs may take the form of opportunity costs that are not included under alternative below-cost pricing tests.[179] In addition, because almost any asset can become transferable,[180] the potential scope of the avoidable cost approach is extensive. Despite the fact that including avoidable asset transfer costs is economically sound, however, the serious practical and policy problems created by including these costs militate against their use in most cases.

Including the avoidable costs of asset transfer in the *Brooke Group* below-cost pricing test is imprudent because calculating those costs is highly speculative—relying on unrealistic assumptions, uncertain econometric analyses, or both.[181] With little or no way to verify such estimations, adoption of the avoidable cost approach may result in misplaced liability, thus punishing legitimate competitive behavior, destroying innocent companies via treble damage awards, and keeping prices abnormally high for

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Using avoidable cost in the calculation of predatory losses makes the size of Block A bigger. Correspondingly, to prove prong two of the *Brooke Group* test, the plaintiff must prove that the predator could likely make Block B just as big or bigger than Block A. The bigger Block A becomes, the more difficult proving an equivalent increase in Block B becomes.

[178] *See supra* note 35 and accompanying text (discussing the dangers of overzealous predatory pricing policies).

[179] *See supra* Section IV (discussing transferable assets).

[180] *See supra* note 119 and accompanying text (explaining how virtually any asset can be deemed transferable).

[181] *See supra* Section V.A (discussing the calculation problems).

consumers. In addition, the uncertainty surrounding liability under the avoidable cost approach may seriously hamper firms' ability to lower prices, compete aggressively, and create innovative products.[182] Given these problems, a blanket rule adopting the avoidable cost approach for all predatory pricing cases is unwise. Furthermore, given a choice, individual courts should only adopt the avoidable cost approach in specific cases where the avoidable costs involved are accurately calculable (if there are such cases). Finally, if a court does include the avoidable costs of asset transfer in a specific case, the court must also include those costs when calculating the probability of recoupment. Failure to do so can result in mistaken liability and the possible destruction of efficient, nonpredatory firms. Although this approach is detrimental to the majority of predatory pricing plaintiffs, it is the most responsible course of action given the calculation difficulties involved.

Ultimately, avoidable asset transfer costs represent one of the last bastions of hope for predatory pricing plaintiffs who have been unable to withstand the *Brooke Group* test. In the absence of avoidable asset transfer costs, the stringent *Brooke Group* rule will continue to dispose of most predatory pricing cases in short order. Thus, as some have suggested, may be the "death knell" of predatory pricing has truly begun to sound.[183] Perhaps rejecting the avoidable costs of asset transfer will drive the final stake through the heart of predatory pricing. If so, this author, borrowing some sage advice from Blue Oyster Cult, suggests one course of action for predatory pricing plaintiffs: "Come on baby . . . don't fear the reaper."[184]

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[182] *See supra* Section V.B (discussing how the avoidable cost approach may cause these problems).

[183] *Supra* note 6 and accompanying text.

[184] Blue Oyster Cult, *(Don't Fear) the Reaper*, *on* DON'T FEAR THE REAPER (Columbia Records 1976).